

There is no separate ammonium-transfer station: the original application discloses an ammonium-extraction-and-transfer station that is either the ion-exchange-station or the alkali-acid station. From there the water is transferred to a regeneration tank.

The EPO alleges that the specification, following the amendment, now contains the notion that the ammonium-transfer station can be separate from the ammonium-extraction station. The EPO is alleging that the original specification failed to disclose the notion that the ammonium-extraction station and the ammonium-transfer station might be "separate".

It is true that the as-examined amended version of claim 1 recites the ammonium-transfer station separately from the ammonium-extraction station. However, our separation of the recitation of the words does not, in fact, change the scope of claim 1. Whether both the extraction function and the transfer function are carried out in a common piece of the overall apparatus, or in separated pieces of the overall apparatus, makes no difference to whether the overall apparatus does or does not fall within the scope of claim 1. That is to say, whether the words are or are not recited separately, in claim 1, does not change the scope of claim 1. We cannot think of any form of apparatus that would be covered by the original recitation of ammonium-extraction-and-transfer station that would not also be covered by the as-examined separate recitation of the ammonium-extraction station and the ammonium transfer station -- nor vice versa.

Besides, we note paragraph [0079] of the as-filed specification, which refers to the ammonium-transfer station separately from the ammonium-extraction station. This recitation does show that the notion of "separateness" of the two functions, in more or less the same manner as expressed in the as-examined claim 1, was indeed contemplated in the original specification.

In fact, the "ammonium-transfer" station, as recited in the as-examined claim 1, also appears in clause [10] of the as-filed claim 1. Therefore, the "ammonium-transfer station" is not even new nomenclature; far less does it amount to new (technical) subject-matter.

Based on the above, we submit that, insofar as the separation of the recitation of the two functions of the ammonium-extraction-and-transfer station amounts to the addition of subject-matter into the specification (which we do not concede), that added subject-matter is not new, in the sense that would be prohibited under Art 123(2).

[005] The above remarks apply also in respect of the other as-examined claims in which the names of the stations are recited.

[006] 1a... From there the water is transferred to a regeneration tank; the term "intermediate tank" is broader and finds no basis in the original application.

We are now calling the tank a "tank". There is ample basis for that term in the original specification -- e.g in paragraph [0023].

[007] 1a... For the expression "which is one of the water-containment components" there is also no basis in the original application. The electrolysis station cannot be considered as one of the components of the secondary water circuit since original claim 1 indicates that the secondary water is conveyed between the ammonium-transfer station and the electrolysis station.

We have amended claim 1 to deal with this point. However, we do not concede that the skilled person would construe the as-filed claim 1 in such manner as to regard it as impossible, from the wording of clause [10], that the electrolysis station could not be a component of the secondary water circuit. Indeed, it seems to us to be much more likely that the skilled person would, from the way original clause 10 is worded, take the electrolysis station TO BE a component of the secondary water circuit. However, we do not pursue the point any further, since we have amended the claim.

[008] 1a... The water exiting the electrolytic cell cannot be considered as secondary water since it is treated water with a different composition than the secondary water in the regeneration tank.

We feel the EPO may be making a mistake, here, as to how the secondary circuit operates. It is clear to the skilled person, from the specification, that the secondary water does NOT remain of a constant composition. The composition changes as the secondary water circulates between and through the components of the secondary circuit. The secondary water passes through the electrolytic cell on its journey around the secondary circuit, and the ammonium content of the secondary-water as it exits the cell is of course lower than the ammonium content of the secondary-water as it entered the cell. That is what the cell is there for.

[009] 1a... The expression "ammonium station" finds no basis in the original application and cannot be

deduced from the figures since it has no well-defined meaning.

We disagree with this point, for the same reasons as discussed in section [004] above.

[0010] 1b. In claim 2:

- "Means for adjusting the pH level" is broader than reservoir of caustic or hydrochloric acid

There is no law prohibiting an amended claim from being broader than the previous version of the claim. By definition, a claim is "broadened" when the amended version of the claim reads onto apparatuses that the unamended claim did not read onto. That is what "broadening" means. Nothing in the EPC prevents an amendment from broadening a claim.

Furthermore, indeed, nothing in the EPC says that a claim is bad simply because the claim reads onto apparatuses the inventor never thought of. Every apparatus claim ever written reads onto apparatuses the inventor never thought of. These additional apparatuses, now included in the scope of the claim, do not count as added subject matter.

If the EPO disagrees as to the law on this matter, we request that the EPO make a specific statement to that effect, and cite the legal precedent that backs up that view.

[0011] 1b. In claim 2:

- "the expression "intermediate tank" has no basis in the original application.

This point is addressed by the amendments to claim 2.

[0012] 1c. Claim 3 in its broadness has no basis in the original application.

This point is addressed by the amendments to claim 3.

[0013] 1d. The features of claims 4-8 have no basis in the original application.

The as-examined claims 4,5,6,8 are cancelled.

As to as-examined claim 7 (now claim xx), the amendments address the "no basis" point.

[0014] 1e. Claim 11: the feature "the apparatus is operable to perform the electrolysis periodically, while the body of secondary-water is recirculating through the ammonium-transfer station" has no basis in the original application.

This point is addressed by the amendments to as-examined claim 11 (now claim 7).

[0015] 1f. Claim 12: according to the original application paragraph 57, line 4, the secondary water can be characterized as brine; there is no basis for "including" brine.

This point is addressed by the amendments to as-examined claim 12 (now claim 8).

[0016] 1g. Claim 17: there is no basis in the original application; the apparatus of claim 1 is not limited to the reduction of the concentration of ammonium in secondary water, but to the reduction of the concentration of ammonium in waste water.

The as-examined claim 17 is cancelled.

[0017] 1h. Claims 18-20: it is a generalization of figures 1 and 2 for which there is no basis in the application. The whole application only discloses an ammonium-extraction-and-transfer station in combination with an electrolysis station. There is no basis for omitting the ammonium-extraction and-transfer station.

We feel this point is essentially the same as the point that was addressed in section [004] above. In any event, there is no legal requirement that an applicant must provide a "basis" for the act of omitting (or including) a feature from a claim. The EPC allows applicants simply to change their minds as to which features they wish to include in the claims.

[0018] We reply to the objections made in section 2 of the E/L as follows.

2. The application does not meet the requirements of Article 84 EPC, because claims 1-15,17 are not clear.
- 2a. Claim 1 relates to an apparatus, but is defined by numerous process features that are in addition unclear.
- Paragraphs 17 to 24 of claim 1 relate largely to the way the apparatus is operated and not to apparatus features themselves.

In fact, paragraphs 17 to 24 of as-examined claim 1 relate -- not to the way the apparatus is operated -- but to elements of physical structure that must be present in an apparatus before the apparatus can be regarded as falling within the scope of claim 1.

Thus, e.g. in clause [17]: *the ammonium-transfer station is so configured that secondary-water in the ammonium-station-outlet is at a higher concentration of dissolved ammonium than secondary-water in the ammonium-station-inlet;*.

If an apparatus A1 meets the words every other clause of claim 1, except that the inlet and outlet are not configured in that defined manner, then the apparatus A1 does not fall within the scope of claim 1. Whether claim 1 does or does not cover the apparatus is a matter of the physical configuration of the apparatus -- not of the manner in which the apparatus is operated.

Likewise in respect of the as-examined clauses [18] to [24]: in each case, the question whether a particular apparatus is covered, or not covered, can be answered irrespective of how (or, indeed, whether) the apparatus is operated. Thus, if an apparatus that does NOT have the capability, as a physical structure, of performing the functions recited in those clauses, then that apparatus is not covered by claim 1. If an apparatus does have the capability of performing the functions recited in those clauses, then the apparatus is covered by the clause, and it makes no difference whether or not the apparatus is actually being operated.

Further: where a claim defines an apparatus as having the capability to perform function F, the law is this: if an apparatus, as a physical structure, is so configured as to be capable of performing function F, as defined in claim 1, then that apparatus is covered by claim 1. If not, not. Defining an apparatus by its capability, as a physical structure, to perform function F, is a perfectly acceptable way of limiting a patent claim. Indeed, the law is that, if an apparatus claim reasonably can be construed in such a way that what is being defined is the physical structure of the apparatus, then the claim must be construed that way, even if the words of the claim might also be construed as a manner of operating the apparatus.

If the EPO were to disagree as to the law on this matter, we would request that the EPO make a specific statement to that effect, and cite the legal precedent that backs up that view.

in regeneration tank and treated water).

We think the EPO has simply made a mistake here. In claim 1, of course the secondary water spends a portion of its time passing through the tank, and of course the secondary water is treated (in/by the electrolysis station) to diminish its ammonium content. The secondary water also of course acquires ammonium content (at/from the ammonium-transfer station). The secondary water is continually acquiring and shedding ammonium.

The waste-water is "treated", of course, by having its ammonium content diminished by/at the ammonium-extraction station. We cannot see that the skilled person would understand that the specification refers to the waste-water, even when treated, as secondary water.

If we are missing the point of the EPO objection here, we request that this basis for refusing claim 1 be clarified and further explained.

[0020] 2b. The expression "secondary water" in independent claim 17 has no well-recognized meaning.

The as-examined claim 17 is cancelled.

[0021] 3. No search report has been drawn up for the subject-matter of claim 16. The subject matter of claim 16 has to be excised and may be made the subject of one or more divisional applications (G2/92). The divisional applications must be filed directly at the European Patent Office in Munich or its branch at The Hague and in the language of the proceedings relating to the present application, cf. Article 76(1) and Rule 4 EPC. The time limit for filing divisional applications (Rule 25(1) EPC) must be observed.

We take it the examiner has simply made a mistake here. Claim 16 is a dependent claim, in that it incorporates all the features of a previous claim -- in fact, two previous claims -- by reference to those previous claims, by number.

[0022] 4. Once an acceptable set of claims with respect to Article 123(2) EPG and Article 84 EPG has been submitted, novelty and inventive step can be examined.

5. When submitting a new set of claims the applicant should also consider the novelty and inventive step objections made in the first communication.

If the EPO were to decide to (continue to) refuse claim 1 on the basis of a novelty or inventive step objection, we would request to be

assured that the EPO has considered all the points we made on those subjects in our response of April 2007, and we would request to be supplied with a carefully-reasoned technical explanation how/why those points can be refuted or ignored.

[0023] 4. . . . In case the applicant does not indicate the exact basis for the amendments (see Guidelines E-II,1), the examining division will not accept the amendments in view of Rule 86(3) EPC.

As far as we understand it, we have complied with the EPC and the Guidelines.

Submitted by:

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Attached:

- Amended claims (5 pages)
- Amendments to claims (3 pages)